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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,069	03/24/2005	Sun Chao Hui	1-36819	2569

43935 7590 11/20/2007  
FRASER CLEMENS MARTIN & MILLER LLC  
28366 KENSINGTON LANE  
PERRYSBURG, OH 43551

EXAMINER
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KIM, SANG K

ART UNIT	PAPER NUMBER
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3654

NOTIFICATION DATE	DELIVERY MODE
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11/20/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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## Interview Summary

**Application No.**

10/529,069

**Applicant(s)**

HUI, SUN CHAO

**Examiner**

SANG KIM

**Art Unit**

3654

All participants (applicant, applicant's representative, PTO personnel):

(1) SANG KIM.

(3) \_\_\_\_\_

(2) Jacob Ward, Reg. #56754.

(4) \_\_\_\_\_

Date of Interview: 13 November 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: New claim 9.

Identification of prior art discussed: U.S. Patent No. 7024790.

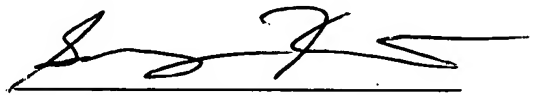
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The proposed amendment to add claim 9 will not be entered.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
Examiner's signature, if required

Law Offices Of  
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**FAX TRANSMISSION**

Date: November 13, 2007  
To: Examiner Sang Kim  
Fax: 571-273-6947  
From: Jacob M. Ward  
Re: Inventor: Sun Chao Hui, Application No. 10/529,069  
Filed March 24, 2005; Group Art Unit 3654  
Attorney Docket 1-36819

We are transmitting a total of 11 pages (including cover sheet).  
If transmission is not complete, please call 419.874.1100.

**COMMENTS:**

For Examiner Kim's consideration prior to our interview at 1:00 p.m. today.

Thank you.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE.

In re Application of:	)	
Sun Chao Hui	)	Group Art Unit: 3654
	)	
Serial No. 10/529,069	)	
	)	Examiner: Sang Kim
Filed: March 24, 2005	)	
	)	
For: MEASURING TAPE	)	Attorney Docket 1-36819
	)	

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November 13, 2007

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**AMENDMENT AFTER FINAL**

Honorable Sir:

Responsive to the Office Action dated August 14, 2007, please amend the above entitled application in accordance with the following.

Respectfully submitted,

---

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JDM/JMW

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CLAIMS

1. (currently amended) A measuring tape comprising:

- a first axis axis;
- a spool and a first sheave turnable together about said first axis;
- an elongate flexible blade having a free end and a terminal end, the free end adapted to extend out of [[said]] a housing, said blade wound upon said spool when and normally in a fully retracted position on said spool;
- a second axis;
- a spiral spring assembly and a second sheave turnable together about said second axis, said spiral spring assembly including a spirally wound spring wound ~~therearound~~ there around and contained there within so as to wind and unwind about said second axis as said second sheave turns; and
- a belt connecting said first sheave and said second sheave, whereby extension of said blade from its retracted position causes turning of said spool which in turn causes turning of said spring assembly to place the spring of said spring assembly in a spring-wound condition which spring will cause retraction of said blade upon release of said blade from an extended position.

2. (currently amended) A measuring tape as defined in Claim 1 further comprising a housing for enclosing said spool, said first sheave, said blade, said spring assembly, said second sheave, and said belt, said housing having a top, bottom sides, and ends with said elongate flexible blade having [[a]] said free end adapted to extend out of said housing, the free end including a fixture adapted to be grasped by a user so as to extend said blade from its ~~normally~~ extracted position substantially inside said housing.

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3. (previously presented) A measuring tape as defined in Claim 2 wherein said housing includes at least two spaced apart inwardly facing side wall surfaces defining a hollow interior of said housing, wherein the side wall surfaces are substantially flat.
4. (previously presented) A measuring tape as defined in Claim 1 including distance measuring indicia imprinted on said elongate flexible blade.
5. (cancelled)
6. (previously presented) A measuring tape as defined in Claim 1 wherein the spring of said spring assembly includes a bias which increases in proportion to the extent of said flexible blade caused to be paid off of said spool.
7. (previously presented) A measuring tape as defined in Claim 1 including hand and finger contoured pads secured to an exterior surface of a housing.
8. (previously presented) A measuring tape as defined in Claim 1 wherein a free end of said elongate blade includes a bracket which militates against the passage of the free end into a housing.

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9. (new) A tape measure having a double-axis reel assembly comprising:
- a primary axis;
  - a primary spool and a first gear turnable together about the primary axis;
  - a flexible measuring tape blade wound upon the primary spool and normally in a fully retracted position on the primary spool;
  - the secondary axis; a secondary spool and a second gear turnable together about the secondary axis;
  - the secondary spool having a self-restoring spring wound around it and contained within the spool so as to wind and unwind about the secondary axis as the second gear turns; and
  - an endless flexible member connecting the first gear and the second gear, whereby extension of the tape blade from its retracted position causes turning of the primary spool which in turn causes turning of the secondary spool to place the spring of the secondary spool in a spring-wound condition which spring will cause retraction of the tape blade upon release of the tape blade from an extended position.

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REMARKS

Claims 1-3 and 8 have been amended to correct certain informalities and typographical errors. Claim 5 has been cancelled.

Claim 9 is new and has been added to provoke an interference with Qilian (U.S. Pat. No. 7,024,790). No new matter has been added.

The amendments and new claim do not require further search and consideration because the subject matter of the amendments was previously presented to the Examiner. The amendments and new claim also place the claims in better form for consideration on appeal.

Entry of the amendments and reconsideration of the application is respectfully requested.

Claims 1-8 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because Claim 1 recites the limitation "said housing" without proper antecedent basis, and Claims 1-2 recite the term "normally" which the Examiner states is indefinite and vague. In response, Claim 1 has been amended to recite "a housing" and the term "normally" has been removed from the claims. Accordingly, it is respectfully requested that the rejections under § 112 be withdrawn.

The Examiner has rejected Claims 1-4, 6, and 8 under 35 U.S.C. § 103(a) as being unpatentable over Decarolis et al (U.S. Pat. No. 5,820,057) in view of Caldwell (U.S. Pat. No. 4,551,847) or Quenot et al. (U.S. Pat. No. 4,189,107). The Examiner has rejected Claim 7 under 35 U.S.C. 103(a) as being unpatentable over Decarolis et al. and Caldwell and in further view of Lin (U.S. Pat. No. 6,182,916).

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MPEP 2304

Claim 1 recites the invention as follows:

1. A measuring tape comprising:
  - a first shaft;
  - a spool and a first sheave turnable together about said first shaft
  - an elongate flexible blade having a free end and a terminal end, the free end adapted to extend out of a housing, said blade wound upon said spool when in a fully retracted position on said spool;
  - a second shaft;
  - a spiral spring assembly and a second sheave turnable together about said second shaft, said spiral spring assembly including a spirally wound spring wound there around and contained there within so as to wind and unwind about said second shaft as said second sheave turns; and
  - a belt connecting said first sheave and said second sheave, whereby extension of said blade from its retracted position causes turning of said spool which in turn causes turning of said spring assembly to place the spring of said spring assembly in a spring-wound condition which spring will cause retraction of said blade upon release of said blade from an extended position.

(Emphasis added).

Applicant's invention relates to a measuring tape that includes a spool having a blade wound thereupon when in a retracted position. The measuring tape further includes a spiral wound spring assembly. The spiral wound spring assembly is coupled to the spool with a belt and a pair sheaves, one sheave attached to each of the spring assembly and the spool. The spring assembly has a spring both wound around and disposed within the assembly. Typically, one end of the spring is secured to a housing of the spiral spring assembly and the other end is attached to a shaft. The spring assembly and the sheave attached thereto are turnable together about the shaft. When the free end of the blade is pulled, the spring inside the spring assembly is placed under tension by a rotation movement of the spring assembly. When the free end of the blade is released, a reverse rotational movement of the spring assembly retracts the blade and wrap the blade around the spool.

The Examiner has opined that "Decarolis '057 discloses . . . a spiral spring assembly 80 and a second sheave 86 turnable together about said second axis, said spiral spring assembly (e.g. spring) including a spirally wound spring wound [there around] and contained there within so as to wind and unwind about said second axis as said second sheave turns . . . ". It is respectfully submitted that Decarolis et al. does not teach or suggest a spiral spring assembly and second sheave turnable together about an axis.

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Applicant respectfully points out that reference numeral 80 cited by the Examiner as a teaching of the claimed spiral spring assembly is merely a coiled spring. (Final Rejection at page 3). "A circulate plate or washer 78 seats in the open end of the cup over the coiled spring 80 . . . ." (See Decarolis et al. at col. 3, lines 25-26; and FIG. 2). The Decarolis et al. coiled spring is not the same as the spiral spring assembly of the present claims. The claimed spiral spring assembly includes a spirally wound spring wound there around and contained there within. Significantly, the claimed spiral spring assembly of the invention is also turnable about an axis.

Decarolis et al. discloses a spring motor 70 that includes a cup-shaped casing 72. The casing 72 has several bosses 74 spaced about the housing's circumference. "The bosses 74 function as stops to prevent the casing 72 from rotating in the housing 10." (Decarolis et al. at col. 3, lines 20-40, emphasis added). Decarolis et al. clearly does not teach or suggest that the casing is turnable about an axis. Caldwell, cited as a teaching of a flexible belt drive, also does not teach or suggest the claimed spiral spring assembly turnable about an axis.

The structure of Decarolis necessitates a different operation than that resulting from Applicant's claimed structure. Simply stated, the spring 80 of Decarolis et al. causes a rotation of the gear 86 but not of a spring assembly formed by casing 72 and gear 86 . By merely replacing the transfer gear of Decarolis et al. with the flexible belt drive of Caldwell, the resulting tape measure operates in a different manner from the claimed structure, i.e. by rotating the gear instead of the spring assembly. It is noted that the gear 86 of Decarolis et al. is turnable with the hub 84 but not turnable together with the casing 72. Thus, the flexible belt drive would not be driven by the spiral spring assembly in the combination suggested, but rather by the gear 86.

Substantial modifications to the combined tape measure of Decarolis et al. and Caldwell would be required to arrive at the claimed structure. There is also no teaching or suggestion in either Decarolis et al. or Caldwell to further modify the combined structure to make a spiral spring assembly and sheave turnable together about an axis. Since the combination of Decarolis et al. and Caldwell do not teach or suggest a tape measure having a spiral spring assembly and a

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second sheave turnable together about an axis, Claim 1 and claims depending directly or indirectly therefrom, are patentable.

Quenot et al. also does not teach or suggest the claimed turnable spiral spring assembly. Instead Quenot et al. describes a spool 31 that is driven by an electric motor 96 via a two-stage reducer of the belt type. The electric motor 96 drives a first gear wheel 101. A second pinion gear 105 rigid with the first large wheel 101 is connected by a toothed belt 106 to a second gear wheel 107 fixed to the axle of the spool 31. (Quenot et al. at col. 6, lines 13-32; and in FIG. 10).

It is clear that Quenot et al. does not describe a spiral spring assembly and a second sheave turnable together about said second axis. The reducer between an electric motor and a tape spool is not a teaching or a suggestion of a spiral spring assembly turnable about an axis. In fact, Quenot et al. does not disclose a spring. The Quenot et al. tape measure is driven instead by an electric motor. The Quenot et al. pinion gear and large wheel are connected to a tape spool, and are not connected to a spring assembly. Merely substituting the transfer gear of Decarolis et al. with the Quenot et al. belt and pinion gear/large wheel does not result in the claimed spring assembly turnable about an axis. For these reasons, Claim 1 and claims depending directly or indirectly therefrom are patentable over the combination of Decarolis et al. and Quenot et al.

Claim 7, rejected over Decarolis et al. and Caldwell and in further view of Lin, depends from independent Claim 1. Lin, cited as a teaching of an elastic protective layer, also does not teach or suggest the claimed turnable spiral spring assembly. Accordingly, dependent Claim 7 is deemed patentable for the same reasons as for independent Claim 1 described hereinabove.

Finally, Applicant also requests reconsideration and withdrawal of the rejections under 35 U.S.C. 103(a) because an interference exists between the instant application and Qilian (U.S. Pat. No. 7,024,790). An interference exists if the subject matter of a claim of one party would, if prior art, have anticipated or rendered obvious the subject matter of a claim of the opposing party and vice versa. (37 C.F.R. 41.203).

Claim 1 recites substantially the same subject matter as Claim 1 recited in Qilian. New Claim 9 is a copy of Claim 1 in Qilian. Support for the new Claim 9 is found in the application

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as originally filed, for example, in Claim 1 and at paragraphs [0012], [0018], [0020]-[0021], and [0025]. For the Examiner's convenience, a claim chart is provided below for purpose of comparing the elements of the respective claims.

Us.S. Pat. No. 7,024,790 (Claim 1); Serial No. 10/529,069 (New Claim 9)	Serial No. 10/529,069 (Claim 1 presented in Amendment on July 10, 2007)
A tape measure having a double-axis reel assembly comprising:	A measuring tape comprising:
a primary axis;	a first axis;
a primary spool and a first gear turnable together about the primary axis;	a spool and a first sheave turnable together about said first axis;
a flexible measuring tape blade wound upon the primary spool and normally in a fully retracted position on the primary spool;	an elongate flexible blade having a free end and a terminal end, the free end adapted to extend out of said housing, said blade wound upon said spool and normally in a fully retracted position on said spool;
the secondary axis;	a second axis;
a secondary spool and a second gear turnable together about the second axis;	a spiral spring assembly and a second sheave turnable together about said second axis,
the secondary spool having a self-restoring spring wound around it and contained within the spool so as to wind and unwind about the secondary axis as the second gear turns; and	said spiral spring assembly including a spirally wound spring wound therearound and contained there within so as to wind and unwind about said second axis as said second sheave turns; and
an endless flexible member connecting the first gear and the second gear, whereby extension of the tape blade from its retracted position causes turning of the primary spool which in turn causes turning of the secondary spool to place the spring of the secondary spool in a spring-wound condition which spring will cause retraction of the tape blade upon release of the tape blade from an extended position.	a belt connecting said first sheave and said second sheave, whereby extension of said blade from its retracted position causes turning of said spool which in turn causes turning of said spring assembly to place the spring of said spring assembly in a spring-wound condition which spring will cause retraction of said blade upon release of said blade from an extended position.

Qilian was granted over the Decarolis et al., Caldwell, and Lin references cited against the instant application. The patent to Qilian was filed on June 11, 2004, and is therefore not a valid prior art reference to the instant application, which claims the benefit of Provisional Application No. 60/459,528, filed April 1, 2003. In order for Applicant to initiate the interference proceeding with Qilian; however, it is necessary that at least one of Applicant's claims to be in condition for allowance. (37 C.F.R. 41.102). Since Claim 1 of Qilian was allowed over the prior art references cited by the Examiner, it is submitted that Claim 1 of the

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instant application should also allowable. As new Claim 9 is a copy of Claim 1 from Qilian, it is also respectfully submitted that Claim 9 is in condition for allowance.

In light of the above remarks, entry of the amendments and an Interference Proceeding is respectfully solicited.

While Applicant's attorney has made a sincere effort to properly define Applicant's invention and to distinguish the same from the prior art, should the Examiner deem that other language would be more appropriate, it is requested that a telephone interview be had with Applicant's attorney in a sincere effort to expedite the prosecution of the application.

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